

1. (Amended) A method [of inhibiting activation by CD40 ligand of cells bearing CD40 on the cell surface, other than B cells, comprising contacting the cells with an agent capable of inhibiting interaction between CD40 ligand and the cells, in an amount effective to inhibit activation of the cells.] for treating chronic inflammatory autoimmune disease in a subject comprising the step of administering to said subject an antibody, or portion thereof, which binds specifically to a protein specifically bound by monoclonal antibody 5c8, produced by the hybridoma having ATCC Accession No. HB 10916.

102. A method for treating multiple sclerosis in a subject comprising the step of administering to said subject an antibody, or portion thereof, which binds specifically to a protein specifically bound by monoclonal antibody 5c8, produced by the hybridoma having ATCC Accession No. HB 10916.

103. A method for treating scleroderma in a subject comprising the step of administering to said subject an antibody, or portion thereof, which binds specifically to a protein specifically bound by monoclonal antibody 5c8, produced by the hybridoma having ATCC Accession No. HB 10916.

104. A method for treating vasculitis in a subject comprising the step of administering to said subject an antibody, or portion thereof, which binds specifically to a

protein specifically bound by monoclonal antibody 5c8, produced by the hybridoma having ATCC Accession No. HB 10916.

105. A method for treating arthritis in a subject comprising the step of administering to said subject an antibody, or portion thereof, which binds specifically to a protein specifically bound by monoclonal antibody 5c8, produced by the hybridoma having ATCC Accession No. HB 10916.

106. The method according to any one of claims 1, 102, 103, 104 or 105, wherein said antibody is administered in an amount capable of inhibiting CD40 ligand-induced activation of CD40 bearing endothelial cells, fibroblasts, epithelial cells, T cells, basophils, macrophages or dendritic cells in said subject.

107. The method according to any one of claims 1, 102, 103, 104 or 105, wherein said antibody is effective to inhibit transmigration of inflammatory cells across the barrier of endothelial cells in said subject.

108. The method according to any one of claims 1, 102, 103, 104 or 105, wherein said antibody is a monoclonal antibody or a polyclonal antibody.

109. The method according to any one of claims 1, 102, 103, 104 or 105, wherein said antibody is selected from the group consisting of: chimeric antibodies, primatized antibodies, humanized antibodies and antibodies which include a CDR region from a first human and an antibody scaffold from a second human.

110. The method according to any one of claims 1, 102, 103, 104 or 105, wherein said antibody is monoclonal antibody 5c8 which is produced by the hybridoma having ATCC Accession No. HB 10916.

111. The method according to any one of claims 1, 102, 103, 104 or 105, wherein said antibody is a humanized monoclonal antibody 5c8 or a primatized monoclonal antibody 5c8.

112. The method according to any one of claims 1, 102, 103, 104 or 105, wherein said portion of said antibody comprises a complementarity determining region of a light chain or a heavy chain.

113. The method according to any one of claims 1, 102, 103, 104 or 105, wherein said portion of said antibody comprises a variable region of a light chain or a heavy chain.

114. The method according to any one of claims 1, 102, 103, 104 or 105, wherein said portion of said antibody comprises a Fab, F(ab')<sub>2</sub> or a single chain antibody.

115. The method according to any one of claims 1, 102, 103, 104 or 105, wherein said antibody, or portion thereof, is selected by a screening method, which comprises the steps of:

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- (a) isolating a sample of cells comprising endothelial cells, fibroblasts, epithelial cells, T cells, basophils, macrophages or dendritic cells;
  - (b) culturing said sample under conditions permitting activation of the CD40-bearing endothelial cells, fibroblasts, epithelial cells, T cells, basophils, macrophages or dendritic cells;
  - (c) contacting said sample with:
    - (i) cells expressing a protein which is specifically recognized by monoclonal antibody 5c8 produced by the hybridoma having ATCC Accession No. HB 10916, or

(ii) a protein which is specifically recognized by monoclonal antibody 5c8 produced by the hybridoma having ATCC Accession No. HB 10916,

under conditions which permit activation of said CD40-bearing endothelial cells, fibroblasts, epithelial cells, T cells, basophils, macrophages or dendritic cells;

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- (d) contacting said sample with an antibody, or portion thereof, under conditions which permit said antibody to inhibit activation of said CD40-bearing endothelial cells, fibroblasts, epithelial cells, T cells, basophils, macrophages or dendritic cells; and
- (e) determining whether said antibody, or portion thereof, is capable of inhibiting activation of said CD40-bearing endothelial cells, fibroblasts, epithelial cells, T cells, basophils, macrophages or dendritic cells.

116. The method according to claim 115, wherein said sample of cells is isolated from a tissue.

117. The method according to claim 115, wherein said sample of cells is selected from the group consisting of: a cell line in culture, cells isolated from an animal and cells isolated from a body fluid.

118. The method according to any one of claims 1, 102, 103, 104 or 105, wherein said subject is a mammal.

119. The method according to claim 118, wherein said mammal is a human or a non-human primate.

120. The method according to any one of claims 1, 102, 103, 104 or 105, wherein said antibody, or portion thereof, is administered to said subject by a parenteral route.

121. The method according to claim 120, wherein said parenteral route is selected from the group consisting of: intravenous, intravascular, intraarterial, subcutaneous, intramuscular, intratumor, intraperitoneal, intraventricular, intraepidural, oral, nasal, ophthalmic, rectal, topical and inhalation routes.

122. The method according to any one of claims 1, 102, 103, 104 or 105, wherein said antibody, or portion thereof, is administered to said subject by sustained release administration.

123. The method according to claim 122, wherein said sustained release administration comprises depot injection of an erodible implant.

124. The method according to any one of claims 1, 102, 103, 104 or 105, wherein said antibody, or portion thereof, is administered to said subject at a dosage range of between about 0.01 and 200 mg/kg body weight of said subject.

125. The method according to any one of claims 1, 102, 103, 104 or 105, wherein said antibody, or portion thereof, is administered to said subject at a dosage range of between about 0.01 and 50 mg/kg body weight of said subject.

126. The method according to any one of claims 1, 102, 103, 104 or 105, wherein said antibody, or portion thereof, is administered to said subject at a dosage range of between about 1 and 30 mg/kg body weight of said subject.

127. The method according to claim 124, wherein said antibody, or portion thereof, is administered to said subject at intervals ranging from each day to every other month.

128. The method according to claim 125, wherein said antibody, or portion thereof, is administered to said subject at intervals ranging from each day to every other month.

129. The method according to claim 126, wherein said antibody, or portion thereof, is administered to said subject at intervals ranging from each day to every other month.

130. The method according to claim 124, wherein said antibody, or portion thereof, is administered to said subject daily for the first three days of treatment, after which the compound is administered every 3 weeks, with each administration being intravenously at 5 or 10 mg/kg body weight of said subject.

131. The method according to claim 125, wherein said antibody, or portion thereof, is administered to said subject daily for the first three days of treatment, after which the compound is administered every 3 weeks, with each administration being intravenously at 5 or 10 mg/kg body weight of said subject.

132. The method according to claim 126, wherein said antibody, or portion thereof, is administered to said subject daily for the first three days of treatment, after which the compound is administered every 3 weeks, with each administration being intravenously at 5 or 10 mg/kg body weight of said subject.



133. The method according to claim 124, wherein said antibody, or portion thereof, is administered to said subject daily intravenously at a dosage of 5 mg/kg body weight of said subject for the first three days of treatment, after which the antibody, or portion thereof, is administered subcutaneously or intramuscularly every week at a dosage of 10 mg/kg of said subject.

134. The method according to claim 125, wherein said antibody, or portion thereof, is administered to said subject daily intravenously at a dosage of 5 mg/kg body weight of said subject for the first three days of treatment, after which the antibody, or portion thereof, is administered subcutaneously or intramuscularly every week at a dosage of 10 mg/kg of said subject.

135. The method according to claim 126, wherein said antibody, or portion thereof, is administered to said subject daily intravenously at a dosage of 5 mg/kg body weight of said subject for the first three days of treatment, after which the antibody, or portion thereof, is administered subcutaneously or intramuscularly every week at a dosage of 10 mg/kg of said subject.

136. The method according to claim 124, wherein a single dose of said antibody, or portion thereof, is administered to

said subject parenterally at 20 mg/kg body weight of said subject, followed by administration of the antibody, or portion thereof, subcutaneously or intramuscularly every week at a dosage of 10 mg/kg per subject.

137. The method according to claim 125, wherein a single dose of said antibody, or portion thereof, is administered to said subject parenterally at 20 mg/kg body weight of said subject, followed by administration of the antibody, or portion thereof, subcutaneously or intramuscularly every week at a dosage of 10 mg/kg per subject.

138. The method according to claim 126, wherein a single dose of said antibody, or portion thereof, is administered to said subject parenterally at 20 mg/kg body weight of said subject, followed by administration of the antibody, or portion thereof, subcutaneously or intramuscularly every week at a dosage of 10 mg/kg per subject.

139. The method according to claim 124, wherein said antibody or portion thereof is administered with a gene therapy vector or a therapeutic agent.

140. The method according to claim 125, wherein said antibody or portion thereof is administered with a gene therapy vector or a therapeutic agent.

141. The method according to claim 126, wherein said antibody or portion thereof is administered with a gene therapy vector or a therapeutic agent.

142. The method according to claim 139, wherein said therapeutic agent is an antigenic pharmaceutical or blood product.

143. The method according to claim 140, wherein said therapeutic agent is an antigenic pharmaceutical or blood product.

144. The method according to claim 141, wherein said therapeutic agent is an antigenic pharmaceutical or blood product.

REMARKS

Applicants have amended page 1 of the specification to refer to and update the status of parent applications 08/567,391, 08/566,258 and 08/637,323 from which the present application claims priority under 35 U.S.C. § 120. Applicants have reviewed the specification for the necessity of Sequence Listing references and have amended the specification to refer to all nucleotide and amino acid sequences by the appropriate SEQ ID NO. More particularly, SEQ ID NO:1 is referred to at page 11, lines 25 and page 23, line 22 of the specification.